

## Claims

- [1] An apparatus for processing transmission/reception signals in a base transceiver station (BTS), comprising:
- a coupler connected to an antenna for providing reception signals;
  - a duplexer having three terminals for routing the reception signals at a first terminal to a second terminal of the duplexer, and routing transmission signals at a third terminal of the duplexer to the first terminal, said coupler being further operative to provide the transmission signals at the first terminal to the antenna; and
  - a narrow band low-noise amplifying portion connected to the second terminal for amplifying the reception signals from the second terminal, said narrow band low-noise amplifier being operative to suppress out-of-band interference signals such that reception sensitivity is improved.
- [2] An apparatus for processing transmission/reception signals in a base transceiver station (BTS), comprising:
- a coupler connected to an antenna for providing reception signals;
  - a duplexer having three terminals for routing the reception signals at a first terminal to a second terminal of the duplexer, and routing transmission signals at a third terminal of the duplexer to the first terminal, said coupler being further operative to provide the transmission signals at the first terminal to the antenna;
  - a low-noise amplifier connected to the second terminal for amplifying the reception signals from the second terminal; and
  - a surface acoustic wave filter (SAW filter) for suppressing out-of-band interference signals such that reception sensitivity can be improved.
- [3] A transceiver in a BTS, comprising an Analog Conversion board Assembly (ACA), an amplifier for amplifying transmission signals, and a front-end unit for processing transmission and reception signals, wherein the transceiver is characterized in that a SAW filter module is inserted between the front-end unit and the ACA for suppressing out-of-band interference signals included in the reception signals.